

## WEST Search History

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DATE: Wednesday, September 19, 2007

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*DB=PGPB,USPT; PLUR=YES; OP=OR*

<input type="checkbox"/>	L2	(526/64 )![CCLS]	754
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<input type="checkbox"/>	L1	(422/138 )![CCLS]	341
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END OF SEARCH HISTORY

structure plugs (34) of polymer material in said structure, said polymer material in a first state blocking said channel from liquid flow, and in a second state providing a free path-way (32) for liquid flow. Energy is selectively applied so as to cause said polymer to enter a desired one of said first or second states. It also relates to a micro channel valve system, comprising a plurality of such plugs (34). Additionally it comprises a chemical reactor, comprising a plurality of micro chambers interconnected by micro channels, having a valve system according to the invention.

SUMM This object is achieved with the method as claimed in claim 1, and the micro channel valve system as claimed in claim 13, and the chemical reactor as claimed in claim 19, respectively.

DETD 1) For polymers prepared by radical polymerization (e.g. polyacrylamides, polyacrylates, polymethacrylates or polyvinylamides) the channel surface can be modified to contain reactive groups capable of participating in the polymerization. Such groups can be active as initiators (e.g. azo or peroxide groups), copolymerizable groups (e.g. double bonds) or chain transfer groups (e.g. thiols or tertiary amines). Examples of ways to introduce the reactive groups are listed below:

CLM What is claimed is:

19. A chemical reactor comprising a plurality of micro chambers interconnected by micro channels that are part of a liquid transportation system, having a valve system of claim 13, provided in at least one of said micro channels.

20. The chemical reactor of claim 19, wherein said chambers and micro channels are provided in a planar substrate.

=> FIL STNGUIDE  
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
123.54	123.75

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-3.90	-3.90

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FILE CONTAINS CURRENT INFORMATION.  
LAST RELOADED: Sep 14, 2007 (20070914/UP).

=> d his full

(FILE 'HOME' ENTERED AT 17:15:35 ON 19 SEP 2007)  
SET ABBR ON PERM  
SET PLURALS ON PERM

FILE 'USPATFULL, USPATOLD, USPAT2, CAPLUS, JAPIO' ENTERED AT 17:16:04 ON 19 SEP 2007

L1 1117 SEA ABB=ON PLU=ON (MICRO(1W) CHANNEL? OR MICROCHANNEL? OR  
MICRO(1W) TUBE? OR MICROTUBE? OR MICRO(1W) CAPILLAR? OR  
MICROCAPILLAR?)(10A)(REACTOR# OR MICROREACT?)  
L2 137961 SEA ABB=ON PLU=ON RADICAL?(4A)(POLYMER? OR MONOMER?)  
L3 24 SEA ABB=ON PLU=ON L1 AND L2  
D L3 1-24 IBIB ABS

SN 10/565,652

D L3 15 IBIB HIT  
D L3 13 IBIB HIT  
D L3 11 IBIB HIT  
D L3 6 IBIB HIT

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FILE HOME

FILE USPATFULL

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 18 Sep 2007 (20070918/PD)  
FILE LAST UPDATED: 18 Sep 2007 (20070918/ED)  
HIGHEST GRANTED PATENT NUMBER: US7272859  
HIGHEST APPLICATION PUBLICATION NUMBER: US2007214536  
CA INDEXING IS CURRENT THROUGH 18 Sep 2007 (20070918/UPCA)  
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 18 Sep 2007 (20070918/PD)  
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2007  
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2007

FILE USPATOLD

FILE COVERS U.S. PATENTS 1790-1975  
Produced using data provided by Univentio.

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FILE USPAT2

FILE COVERS 2001 TO PUBLICATION DATE: 18 Sep 2007 (20070918/PD)  
FILE LAST UPDATED: 18 Sep 2007 (20070918/ED)  
HIGHEST GRANTED PATENT NUMBER: US2007146829  
HIGHEST APPLICATION PUBLICATION NUMBER: US2007214534  
CA INDEXING IS CURRENT THROUGH 18 Sep 2007 (20070918/UPCA)  
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 18 Sep 2007 (20070918/PD)  
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2007  
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2007

FILE CAPLUS

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FILE COVERS 1907 - 19 Sep 2007 VOL 147 ISS 13  
FILE LAST UPDATED: 18 Sep 2007 (20070918/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

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<http://www.cas.org/infopolicy.html>

FILE JAPIO

FILE LAST UPDATED: 10 SEP 2007 <20070910/UP>

FILE COVERS APRIL 1973 TO MAY 31, 2007

>>> GRAPHIC IMAGES AVAILABLE <<<

FILE STNGUIDE

FILE CONTAINS CURRENT INFORMATION.

LAST RELOADED: Sep 14, 2007 (20070914/UP).

=> log y

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.72

124.47

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

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0.00

-3.90

STN INTERNATIONAL LOGOFF AT 17:38:40 ON 19 SEP 2007